

## Broadband Amplifier, 0.01 to 50 GHz, 32 dB Gain, +18 dBm P<sub>1dB</sub>, 6.0 dB NF

### Description:

**Model SBB-0115033218-2F2F-E3-WP** is a broadband amplifier with a typical small signal gain of 32 dB, a nominal P<sub>1dB</sub> of +18 dBm, and a typical noise figure of 6.0 dB across the frequency range of 0.01 to 50 GHz. The DC power requirement for the amplifier is +12 V<sub>DC</sub> at 450 mA. The use of a heat sink is advised to assist in cooling the device. The RF connectors are female 2.4 mm connectors. Other port configurations are available under different model numbers.



### Features:

- Broadband Coverage
- Good Gain Flatness

### Applications:

- RF Microwave & VSAT
- Wireless Infrastructure
- Test Equipment

### Electrical Specifications:

Parameter	Condition	Minimum	Typical	Maximum
Frequency		0.01 GHz		50 GHz
Gain			32 dB	
P <sub>1dB</sub>	0.01-30 GHz		+18 dBm	
P <sub>sat</sub>	0.01-45 GHz		+19 dBm	
Noise Figure			6.0 dB	
Input Max Power (No Damage)				0 dBm
Input Return Loss			10 dB	
Output Return Loss			10 dB	
DC Voltage			+12 V <sub>DC</sub>	
DC Supply Current			450 mA	500 mA
Specification Temperature			+25 °C	
Operating Temperature		0 °C		+50 °C

### Mechanical Specifications:

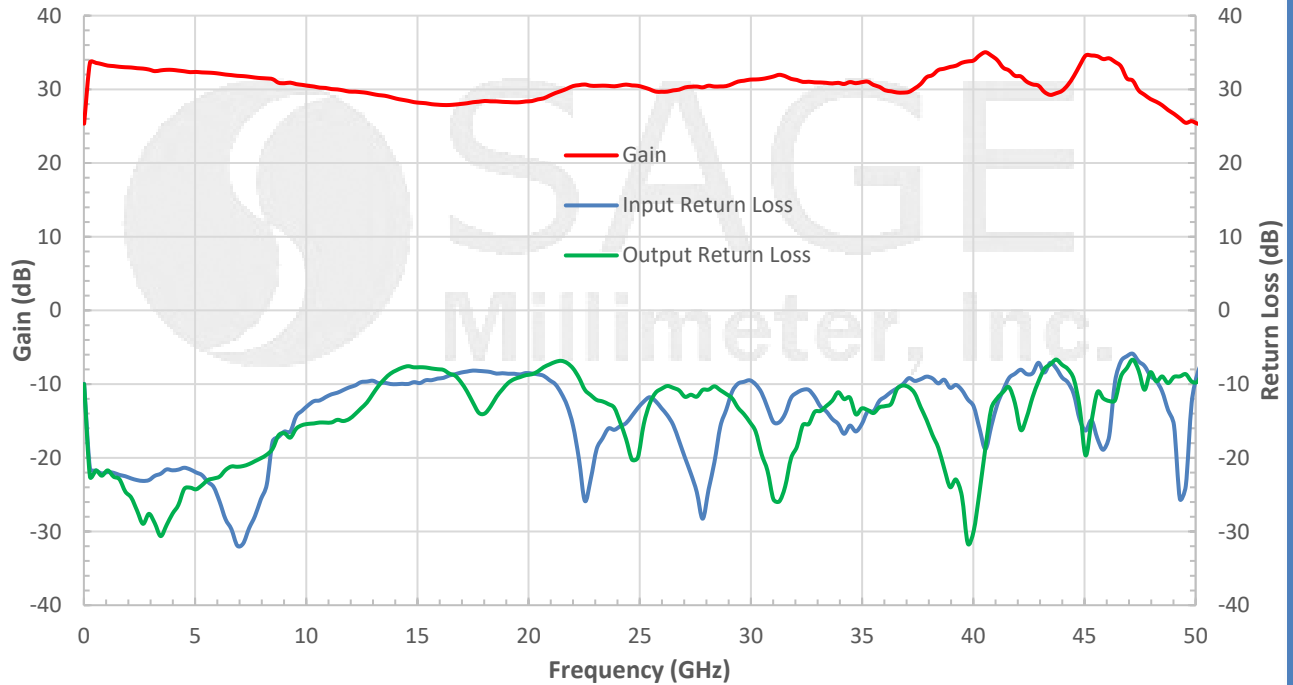
Item	Specification
Input	2.4 mm (F)
Output	2.4 mm (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.06 Oz
Size	1.38" (L) x 1.58" (W) x 0.47" (H)
Outline	BG-ZC-1



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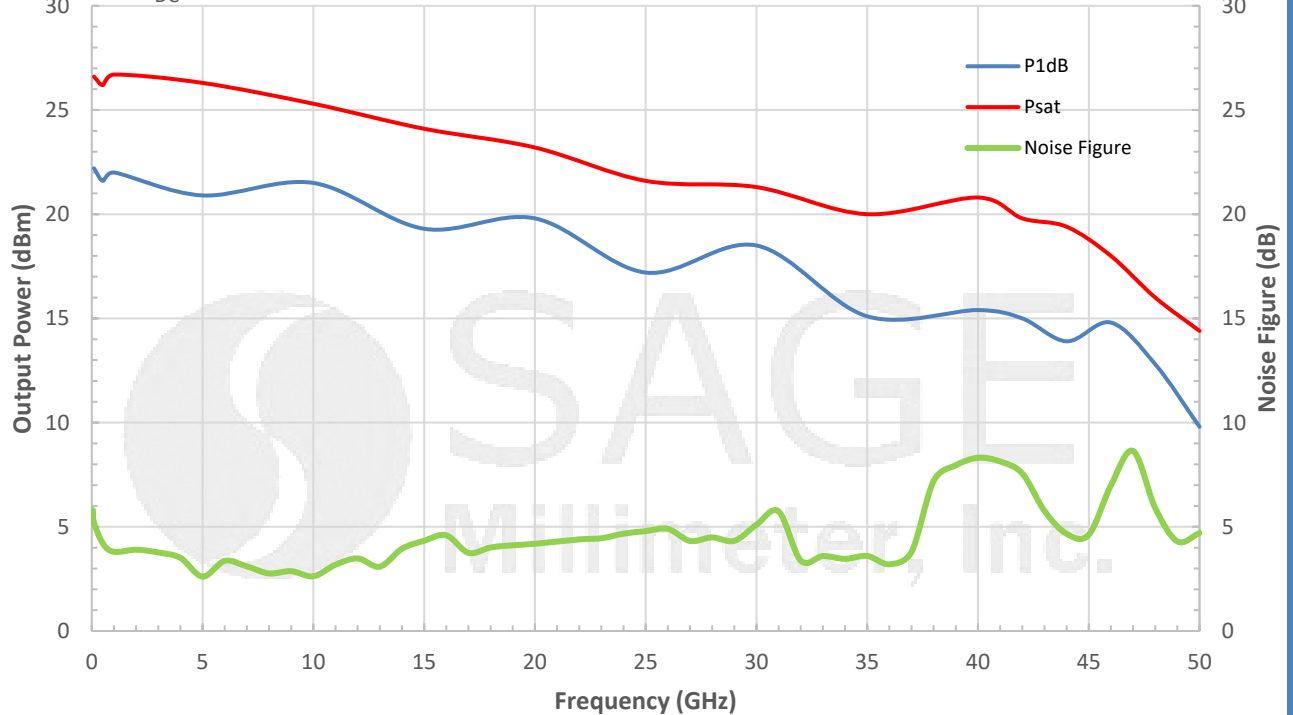
### Typical Performance vs. Frequency

Bias: +12 V<sub>DC</sub>/450 mA



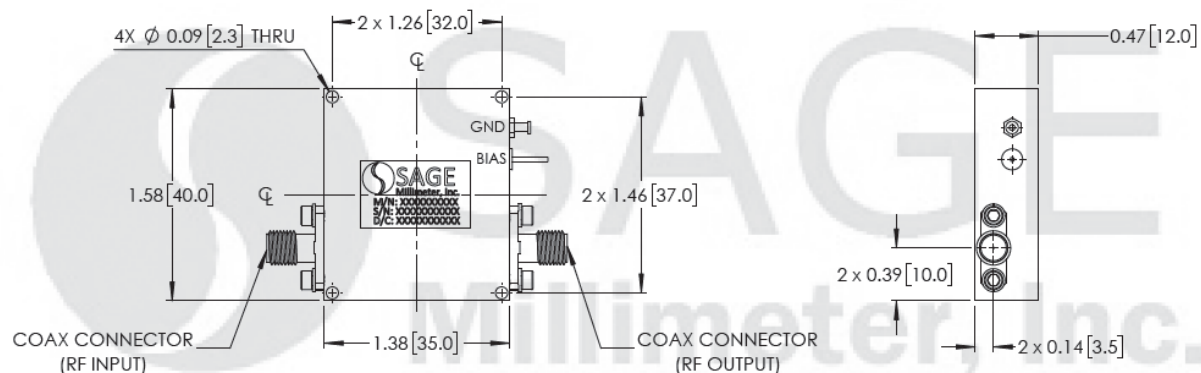
### Typical P<sub>1dB</sub> & Psat and Noise Figure vs Frequency

Bias: +12 V<sub>DC</sub>/650 mA



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**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])



### Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model numbers.

### Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed +50 °C. Use proper heatsink or fan if necessary.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

